

UIIdaho Law Digital Commons @ UIIdaho Law

In re Klamath River (Klamath Tribe)

Hedden-Nicely

12-4-2009

Ex. 280-US-483

Unknown

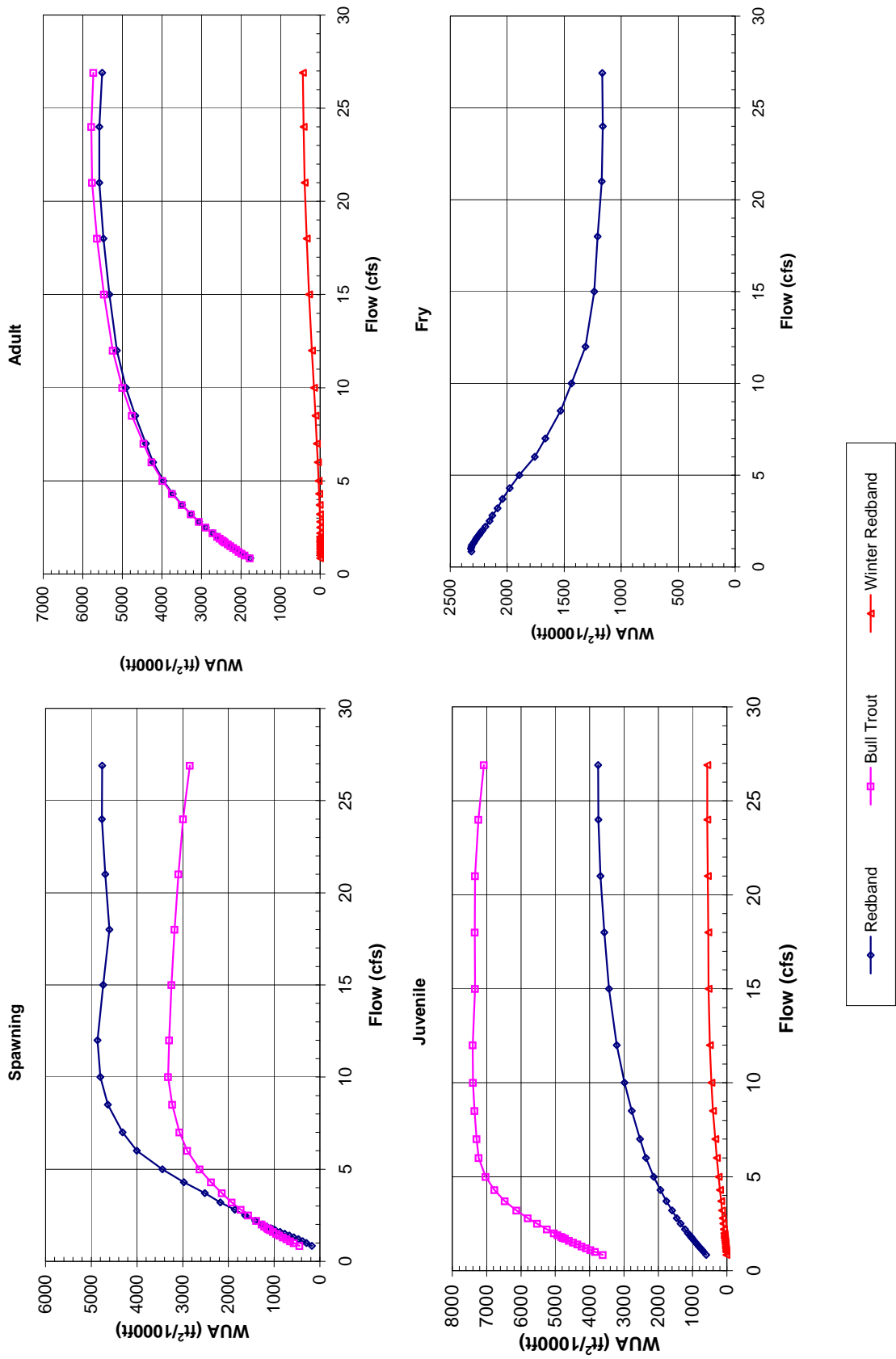
Follow this and additional works at: <https://digitalcommons.law.uidaho.edu/klamath>

Recommended Citation

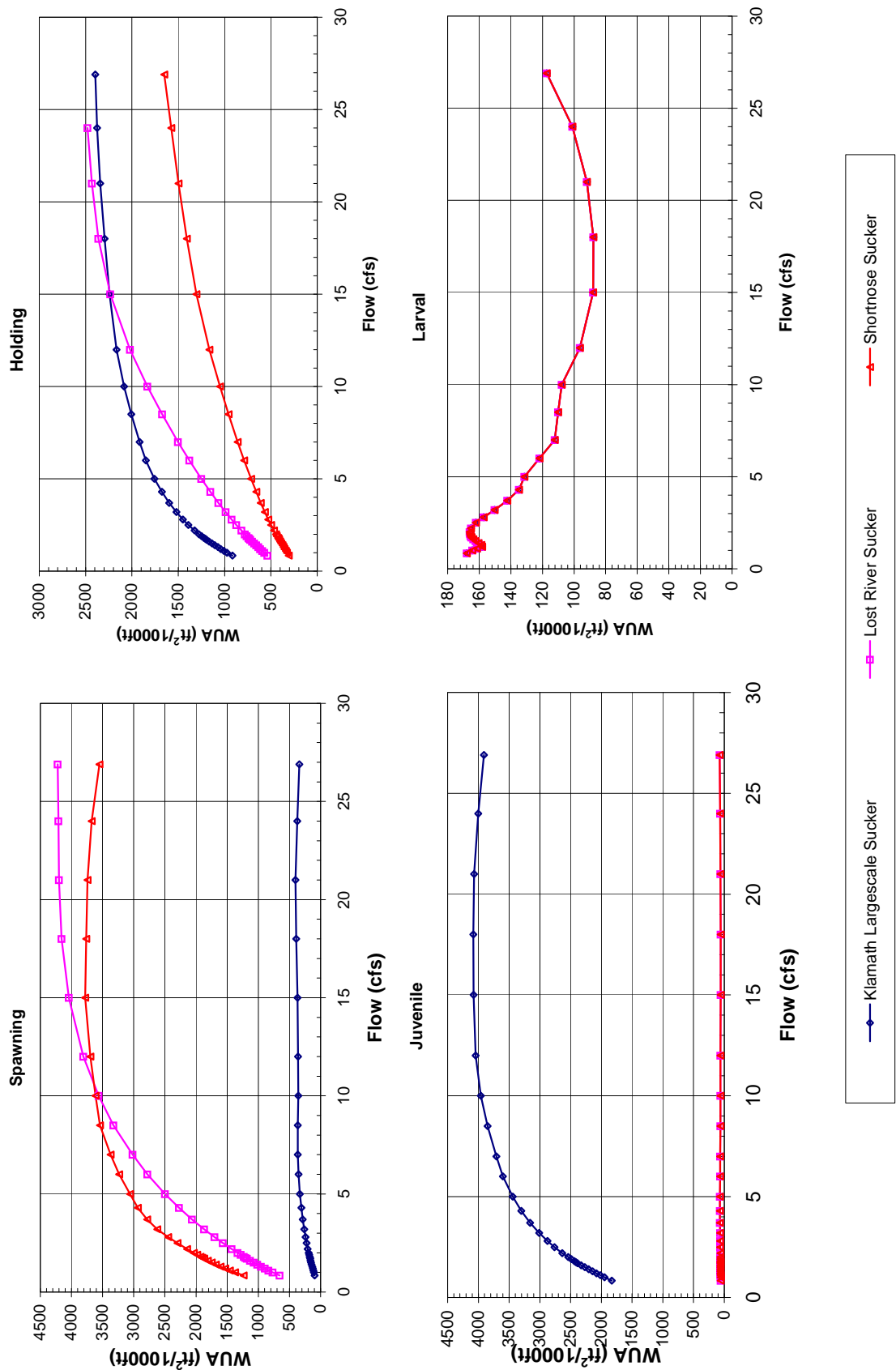
Unknown, "Ex. 280-US-483" (2009). *In re Klamath River (Klamath Tribe)*. 215.
<https://digitalcommons.law.uidaho.edu/klamath/215>

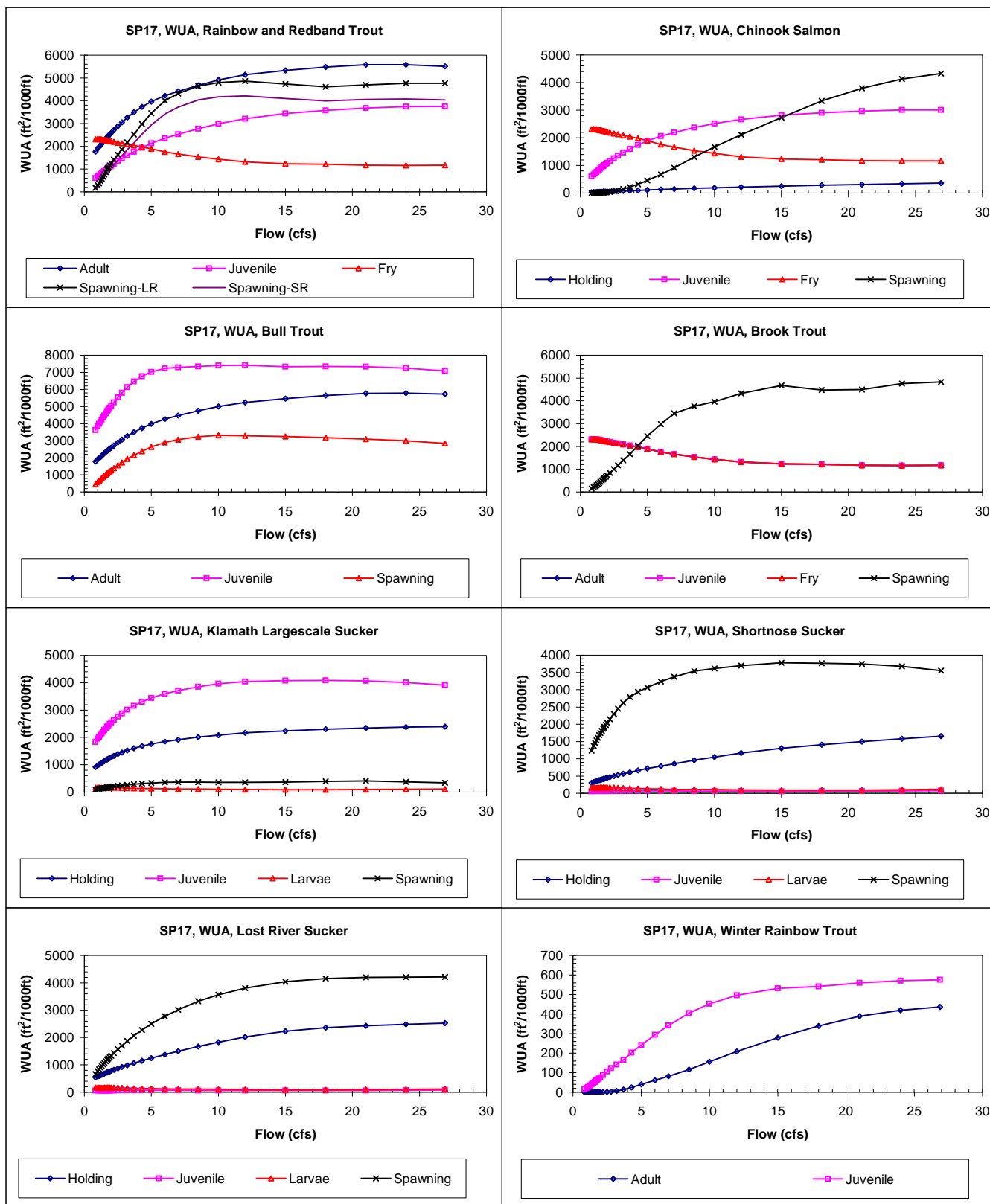
This Expert Report is brought to you for free and open access by the Hedden-Nicely at Digital Commons @ UIIdaho Law. It has been accepted for inclusion in In re Klamath River (Klamath Tribe) by an authorized administrator of Digital Commons @ UIIdaho Law. For more information, please contact annablaine@uidaho.edu.

Site SP 657 Priority Species Habitat - Flow Curves



Site SP 657
Priority Species Habitat - Flow Curves





Claim Reach 657 Sprague River, Site 17, Composite WUA (EA Field Data, Recalibrated in April, 2007)

	Q (cfs)	WUA (ft ² /1000ft)				
		Adult	Juvenile	Fry	Spawning -	
					Large River	Small River
Rainbow and Redband Trout	0.84	1766	603	2314	176	141
	1	1898	680	2318	296	245
	1.1	1975	726	2314	376	315
	1.2	2047	772	2309	468	395
	1.3	2116	818	2297	570	485
	1.4	2187	865	2287	668	569
	1.5	2258	912	2276	767	655
	1.6	2327	959	2265	871	744
	1.7	2395	1005	2253	980	837
	1.75	2428	1027	2246	1033	881
	1.8	2461	1049	2240	1077	918
	1.9	2527	1093	2230	1164	990
	2	2590	1137	2217	1254	1067
	2.2	2713	1223	2191	1412	1204
	2.5	2889	1347	2155	1636	1396
	2.8	3056	1461	2131	1862	1587
	3.2	3263	1596	2086	2177	1853
	3.7	3488	1759	2041	2516	2139
	4.3	3727	1938	1979	2977	2530
	5	3962	2129	1894	3446	2936
	6	4223	2355	1758	4002	3421
	7	4407	2534	1664	4318	3717
	8.5	4675	2773	1532	4640	4030
	10	4908	2986	1435	4798	4170
	12	5139	3211	1314	4865	4216
	15	5326	3439	1237	4740	4102
	18	5477	3573	1207	4605	3994
	21	5585	3682	1169	4693	4058
	24	5585	3747	1161	4768	4075
	26.9	5512	3751	1166	4764	4037

	Q (cfs)	WUA (ft ² /1000ft)			
		Holding	Juvenile	Fry	Spawning
Chinook Salmon	0.84	30	600	2314	0
	1	34	674	2318	0
	1.1	36	718	2314	0
	1.2	38	761	2309	1
	1.3	40	803	2297	2
	1.4	42	847	2287	4
	1.5	44	889	2276	7
	1.6	47	931	2265	10
	1.7	49	972	2253	14
	1.75	50	992	2246	16
	1.8	51	1012	2240	19
	1.9	53	1050	2230	23
	2	55	1088	2217	29
	2.2	59	1159	2191	41
	2.5	65	1262	2155	65
	2.8	71	1354	2131	98
	3.2	78	1462	2086	146
	3.7	88	1596	2041	216
	4.3	99	1741	1979	322
	5	112	1891	1894	461
	6	129	2059	1758	674
	7	145	2192	1664	911
	8.5	169	2371	1532	1299
	10	190	2519	1435	1674
	12	216	2667	1314	2115
	15	251	2817	1237	2735
	18	282	2905	1207	3336
	21	311	2969	1169	3795
	24	336	3007	1161	4133
	26.9	358	3008	1166	4331

	Q (cfs)	WUA (ft ² /1000ft)			
		Adult	Juvenile	Fry	Spawning
Bull Trout	0.84	1777	3619		445
	1	1907	3845		572
	1.1	1984	3981		649
	1.2	2056	4109		728
	1.3	2125	4232		809
	1.4	2196	4357		885
	1.5	2267	4479		955
	1.6	2336	4601		1023
	1.7	2404	4716		1091
	1.75	2437	4773		1124
	1.8	2470	4828		1154
	1.9	2535	4938		1214
	2	2598	5043		1274
	2.2	2721	5246		1393
	2.5	2897	5533		1566
	2.8	3063	5799		1729
	3.2	3271	6132		1931
	3.7	3498	6472		2145
	4.3	3742	6775		2381
	5	3985	7030		2629
	6	4262	7232		2903
	7	4467	7293		3068
	8.5	4756	7351		3232
	10	5000	7394		3317
	12	5243	7408		3295
	15	5462	7334		3248
	18	5643	7346		3178
	21	5767	7335		3093
	24	5786	7241		2991
	26.9	5729	7082		2842

	Q (cfs)	WUA (ft ² /1000ft)			
		Adult	Juvenile	Fry	Spawning
Brook Trout	0.84	2314	2314	2314	143
	1	2318	2318	2318	206
	1.1	2314	2314	2314	246
	1.2	2309	2309	2309	292
	1.3	2297	2297	2297	341
	1.4	2287	2287	2287	392
	1.5	2276	2276	2276	445
	1.6	2265	2265	2265	501
	1.7	2253	2253	2253	556
	1.75	2246	2246	2246	585
	1.8	2240	2240	2240	612
	1.9	2230	2230	2230	665
	2	2217	2217	2217	720
	2.2	2191	2191	2191	833
	2.5	2155	2155	2155	999
	2.8	2131	2131	2131	1170
	3.2	2086	2086	2086	1392
	3.7	2041	2041	2041	1662
	4.3	1979	1979	1979	2039
	5	1894	1894	1894	2454
	6	1758	1758	1758	2975
	7	1664	1664	1664	3446
	8.5	1532	1532	1532	3759
	10	1435	1435	1435	3965
	12	1314	1314	1314	4329
	15	1237	1237	1237	4670
	18	1207	1207	1207	4472
	21	1169	1169	1169	4491
	24	1161	1161	1161	4761
	26.9	1166	1166	1166	4826

Claim Reach 657 Sprague River, Site 17, Composite WUA (EA Field Data, Recalibrated in April, 2007)

	Q (cfs)	WUA (ft ² /1000ft)			
		Holding	Juvenile	Larvae	Spawning
Klamath Largescale Sucker	0.84	916	1832	168	96
	1	974	1947	164	110
	1.1	1008	2015	162	118
	1.2	1041	2080	158	127
	1.3	1072	2142	159	135
	1.4	1105	2207	161	144
	1.5	1137	2269	162	152
	1.6	1167	2329	164	161
	1.7	1196	2386	165	169
	1.75	1210	2413	165	172
	1.8	1223	2439	166	176
	1.9	1249	2490	166	184
	2	1275	2540	166	192
	2.2	1324	2635	165	208
	2.5	1390	2764	162	227
	2.8	1449	2876	157	243
	3.2	1521	3012	150	264
	3.7	1599	3157	142	287
	4.3	1678	3301	135	310
	5	1756	3441	131	334
	6	1850	3601	122	354
	7	1917	3707	112	365
	8.5	2008	3851	110	365
	10	2085	3961	108	360
	12	2167	4046	96	360
	15	2240	4077	88	369
	18	2295	4084	88	392
	21	2343	4068	92	406
	24	2375	4004	101	377
	26.9	2396	3912	117	343

	Q (cfs)	WUA (ft ² /1000ft)			
		Holding	Juvenile	Larvae	Spawning
Shorthose Sucker	0.84	307	59	168	1235
	1	327	60	164	1375
	1.1	339	61	162	1456
	1.2	352	62	158	1534
	1.3	363	62	159	1608
	1.4	376	63	161	1681
	1.5	388	64	162	1747
	1.6	401	64	164	1810
	1.7	412	64	165	1869
	1.75	418	65	165	1898
	1.8	424	65	166	1926
	1.9	435	65	166	1982
	2	446	65	166	2037
	2.2	468	65	165	2145
	2.5	498	66	162	2300
	2.8	528	67	157	2449
	3.2	565	69	150	2623
	3.7	609	71	142	2785
	4.3	659	71	135	2936
	5	714	71	131	3062
	6	788	69	122	3237
	7	858	67	112	3371
	8.5	957	63	110	3541
	10	1049	64	108	3612
	12	1165	62	96	3696
	15	1304	57	88	3778
	18	1408	59	88	3765
	21	1497	63	92	3744
	24	1576	68	101	3676
	26.9	1652	75	117	3552

	Q (cfs)	WUA (ft ² /1000ft)			
		Holding	Juvenile	Larvae	Spawning
Lost River Sucker	0.84	536	59	168	659
	1	572	60	164	770
	1.1	594	61	162	835
	1.2	615	62	158	896
	1.3	636	62	159	957
	1.4	658	63	161	1017
	1.5	680	64	162	1076
	1.6	701	64	164	1131
	1.7	722	64	165	1183
	1.75	732	65	165	1208
	1.8	742	65	166	1233
	1.9	762	65	166	1283
	2	781	65	166	1332
	2.2	818	65	165	1430
	2.5	872	66	162	1571
	2.8	923	67	157	1701
	3.2	989	69	150	1870
	3.7	1066	71	142	2063
	4.3	1153	71	135	2273
	5	1250	71	131	2496
	6	1380	69	122	2781
	7	1502	67	112	3017
	8.5	1674	63	110	3328
	10	1833	64	108	3562
	12	2020	62	96	3808
	15	2234	57	88	4042
	18	2363	59	88	4157
	21	2431	63	92	4199
	24	2479	68	101	4210
	26.9	2523	75	117	4220

	Q (cfs)	WUA (ft ² /1000ft)			
		Adult	Juvenile	Fry	Spawning
Winter Rainbow Trout	0.84	0	16		
	1	0	22		
	1.1	0	25		
	1.2	0	30		
	1.3	0	35		
	1.4	0	41		
	1.5	0	47		
	1.6	0	52		
	1.7	0	58		
	1.75	0	61		
	1.8	0	64		
	1.9	0	70		
	2	0	76		
	2.2	0	88		
	2.5	1	106		
	2.8	3	123		
	3.2	6	142		
	3.7	13	166		
	4.3	24	202		
	5	40	241		
	6	62	293		
	7	82	341		
	8.5	115	404		
	10	156	452		
	12	208	496		
	15	279	532		
	18	339	542		
	21	389	560		
	24	420	571		
	26.9	437	576		